## Sector 22. Printing. Cost Factors.

Cost Factor ■	Value*	Explanation
Instruments (10% of direct) =	10	meters and sensors
Freight (5% of direct) =	5	shipping
Installation (44% of direct) =	44	associated piping, electrical equipment, and materials
Startup and Contingency (31% of direct) =	31	spares, bonding, engineering, startup, shakedown, and contingency
Maintenance (5% of capital) =	5	replacement parts and labor
Inspection (1% of capital) =	1	inspection
Electricity Cost (\$0.04840/kwh) =	0.0484	Rolling 12-months ending in March; Average Revenue per Kilowatthour from Retain Sales to Ultimate Consumers (Industry). Electric Power Monthly June 2003. Energy Information Administration
Useful Life (10 years) =	10	payment period
Discount Rate (7%) =	7	interest rate .
Annualized Factor For Initial Costs for Engineering Controls (14.24% of capital) =	14.74	based on useful life and discount rate
Annualized Factor For Engineering Controls Beginning End of Second Year (74.26% of capital) =	74.26	based on useful life and discount rate
Escalation Factor (1.038) =	1.038	Chemical Engineering Magazine Plant Cost Index or similar (current year/past year)

<sup>\*</sup> The cost factor value can be edited and changes will be reflected in all industry sectors

## Sector 22. Printing. Unit Costs.

Cost Description	Base Cost	Escalation Factor	Unit Cost
Cost per hour for an outside	\$90.00	1	\$90.00
industrial hygiene contractor  Cost of a personal sampling pump	\$680.00	1	\$680.00
Variable Cost per sample (e.g.,	· · · · · · · · · · · · · · · · · · ·		
laboratory analysis)	\$60.00	1	\$60.00
Flat Fee For Training Course	\$400.00	1	\$400.00
Cost of a calibration unit	\$1,075.00	1	\$1,075.00
Unit cost of OSHA-regulation warning signs with mounting materials	\$3.03	1.2702	\$3.84
Cost of materials per qualitative fit- testing	\$0.07	1	\$0.07
Unit cost per worker for an air- supplied respirator	\$1,473.33	1	\$1,473.33
Unit cost per employee for a full- face respirator	\$243.00	1	\$243.00
Unit cost per employee for a half- mask respirator	\$35.30	1	\$35.30
Cost of replacement cartridges (2 cartridges per mask)	\$13.74	1	\$13.74
Unit cost per employee for a blasting helmet air-supplied respirator	\$1,164.00	1	\$1,164.00
Cost of materials to clean one respirator	\$1.86	1	\$1.86
Cost of PE coated Tyvek coveralls	\$6.60	1	\$6.60
Cost of Saranex coveralls	\$32.85	1	\$32.85
Cost of Tyvek coveralls	\$4.50	1	\$4.50
Cost of bib aprons Cost of laundering uniforms for one	\$0.58 \$5.50	1 1	\$0.58 \$5.50
employee per week Cost of laundering lab coats for one	\$3.75	1	\$3.75
employee per week			
Cost of clear indirect vent goggles	\$10.10	1	\$10.10
Cost of clear lens safety glasses	\$8.90	1 1	\$8.90 \$8.20
Cost of grey lens safety glasses Cost of lined nitrile gloves	\$8.20 \$2.50	1	\$2.50
Cost of powder surgical nitrile gloves	\$0.24	1	\$0.24
Cost of rough PVC gloves	\$4.10	1	\$4.10
Unit cost of changerooms per employee	\$856.00	1.4742	\$1,261.92
Cost per shower head	\$3,590.00	1,4742	\$5,292.39
Cost per handwashing facility	\$500.00	1	\$500.00
Variable cost per shower (soap, clean towel, water, etc.)	\$0.50	1	\$0.50
Variable cost per handwashing facility (roll paper towels, liquid soap, water)	\$0.06	1	\$0.06
Unit cost of HEPA vacuums	\$1,580.00	1.4742	\$2,329.24
Unit cost of HEPA vacuum replacement filters	\$212.00	1.4742	\$312.53
Unit cost of garbage bags and disposal	\$500.00	1	\$500.00
Full cost of a comprehensive medical exam	\$282.00	1.4211	\$400.76
Full cost of a limited medical exam	\$125.00	1.0000	\$125.00
Cost of additional medical testing after exam results are abnormal	\$150.00	1.4211	\$213.17
Cost of a partial comprehensive medical exam	\$141.00	1.4211	\$200.38
Cost of a partial limited medical exam	\$75.00	1.4211	\$106.59
Cost per employee for training aids and materials	\$2.00	1	\$2.00
Cost per employee for computer file space	\$1.00	. 1	\$1.00

Sector 22. Printing. Wage Rates.

Section	Non-Supervisory Wage Rate (\$/hour)	Supervisor Wage Rate (\$/hour)	Clerical Wage Rate (\$/hour)	Janitorial Wage Rate (\$/hour)	BiLingual Trainer Wage Rate (\$/hour)
1	\$15.41	21.58	11.12	8.42	17.72
2	\$15.17	21.24	10.95	8.29	17.45
4	\$22.40	31.37	16.16	12.24	25.76
5	\$21.83	30.57	15.75	11.93	25.10
6	\$18.49	25.89	13.34	10.10	21.26
7	\$22.40	31.37	16.16	12.24	25.76
8	\$16.68	23.36	12.04	9.11	19.18
9	<b>\$16.71</b>	23.40	12.06	9.13	19.22
10	\$18.52	25.93	13.36	10.12	21.30
11	\$16.62	23.27	11.99	9.08	19.11
12	\$13.76	19.27	9.93	7.52	15.82
13	22.47	31.47	16.21	12.28	25.84
14	22.47	31.47	16.21	12.28	25.84
15	16.39	22.95	11.83	8.96	18.85
17	21.83	30.57	15.75	11.93	25.10
18	24.03	33.65	17.34	13.13	27.63
19	17.33	24.27	12.50	9.47	19.93
20	11.56	16.19	8.34	6.32	13.29
21	16.72	23.41	12.06	9.14	19.23
22	12.07	16.90	8.71	6.60	13.88
23	12.36	17.31	8.92	6.75	14.21
24	18.82	26.35	13.58	10.28	21.64
25	14.85	20.80	10.72	8.11	17.08
26	18.59	26.03	13.41	10.16	21.38
27	15.77	22.08	11.38	8.62	18.14
29	14.41	20.18	10.40	7.87	16.57
30	16.17	22.64	11,67	8.84	18.60
31	18.61	26.06	13.43	10.17	21.40
32	15.97	22.36	11.52	8.73	18.37

22. PRINTING	
Alternative PEL (ug/m³)	0.25
Affected Job Category	None
Page	21-10
Required Controls	None
CAPITAL*	1
Direct equipment (quoted)	\$0
+ Instruments (10% of direct)	\$0
+ Freight (5% of direct)	\$0
+ Installation (44% of direct)	\$0
+ Startup and Contingency (31% of direct)	\$0
Total Capital	\$0
ANNUALIZED	
О&М	
Maintenance (5% of capital)	\$0
+ Inspection (1% of capital)	\$0
+ Electricity	\$0
+ Electric motor HP	0
+ Annual Kwh	0
Total O&M	\$0
+ Annualized Initial Costs (14.24% of capital)	\$0
Total Annualized Cost	\$0
Rounded Total Annualized Cost	\$0
ASSUMPTIONS	
+ ACFM	
+ Length of ductwork, feet	
+ Room size	
+ Other	
	No Engineering
DESIGN BASIS	Controls Required
DEGIGIE DAGIG	for this industry
	Sector

<sup>\*</sup> Some vendors supplied cost for only the equipment while others supplied the cost for equipment and complete installation. In cases where vendors supplied only the cost of equipment, the cost for instruments, freight, installation, and indirect costs were estimated. The cost for instruments, freight, and indirects were included in the cost for installation for vendors supplying costs for equipment and installation. For those cases where instruments, freight, installation, and indirect costs are listed separately; instrumentation includes meters and sensors; installation includes associated piping, and electrical equipment and materials; and indirect costs includes spares, bonding, engineering, startup and shakedown, and contingency.

Sources:

Sector 22. Printing. Engineering Controls by PEL.

22. PRINTING	
Alternative PEL (ug/m³)	1
Affected Job Category	None
Page	21-10
Required Controls	None
LARGE PLANT COSTS	
Total Annualized Cost	\$0
Number of Large Plants	100
Number of Controls per Large Plant	0
Percentage of Large Plants with Workers > PEL	0%
Percentage of Large Plants without Control	0%
Total Number of Controls for Large Plants	0
Annualized Cost to Large Plants	\$0
SMALL PLANT COSTS	
Total Annualized Cost	\$0
Number of Small Plants	400
Number of Controls per Small Plant	0
Percentage of Small Plants with Workers > PEL	0%
Percentage of Small Plants without Control	0%
Total Number of Controls for Small Plants	0
Annualized Cost to Small Plants	\$0

Number of Affected Establishments				
Small Establishments (≤ 20 employees)	400			
Large Establishments (> 20 employees)	100			
Total Establishments	500			

Number of Establishments in Industry Sector			
Number of Establishments ≤ 20 employees 3,205			
Number of Establishments 20 - 499 employees	791		
Number of Establishments > 500 employees	7		

Number of Employees Exposed to Hexavalent Chromium by Job Category in the Printing Industry							
Job Category  Number of Employees   Number of Employees   Employees in Small   Employees   Employees							
Printers	4,500	1,200	5,700				
Mixers	200	0	200				
Shippers	300	400	700				
Total	5,000	1,600	6,600				

Job Category T	Total No. of Workers		tribution (ug/m3	)				
		<lod <0.25="" lod="" to="">0.25 to 0.5 &gt;0.5 to 1.0 &gt;1.0 to 5.0 &gt;5.0 to 10</lod>						>10.0
Printers	5,700	5,700	0	0	0	0	0	0_
Mixers	200	200	0	0	0	0	0	0
Shippers	700	700	0	0	0	0	0	0
Total	6,600	6,600	0	0	0	0	0	0

Job Category		Printing Industr	y CrVI Worker Exp	osure Percentag	e Distribution (	ug/m3)		
	<lod <0.25="" lod="" to="">0.25 to 0.5 &gt;0.5 to 1.0 &gt;1.0 to 5.0 &gt;5.0 to 10.0</lod>							
Printers	100%	0%	0%	0%	0%	0%	0%	
Mixers	100%	0%	0%	0%	0%	0%	0%	
Shippers	100%	0%	0%	0%	0%	0%	0%	
Total	100%	0%	0%	0%	0%	0%	0%	

Job Category	Printing Industry	CrVI Worker Exposu	re Cumulative Per	centage Distribu	tion (ug/m3
	>0.25	>0.5	>1.0	>5.0	>10.0
Printers	0%	0%	0%	0%	0%
Mixers	0%	0%	0%	0%	0%
Shippers	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%

Sector 22. Printing. Engineering Capital Costs - Large Establishments.

Incremental Annualized Costs to Large Printing Establishments								
PEL (ug/m³) 0.25 0.5 1 5 10								
No Engineering Controls	\$0	\$0	\$0	\$0	\$0			
Total \$0 \$0 \$0 \$0								

Cumulative Annualized Costs to Large Printing Establishments							
PEL (ug/m³)	0.25	0.5	1	5	10		
No Engineering Controls	\$0	\$0	\$0	\$0	\$0		
Total	\$0	\$0	\$0	\$0	\$0		

Sector 22. Printing. Engineering Capital Costs - Small Establishments.

Incremental Annualized Costs to Small Printing Establishments							
PEL (ug/m³)	0.25	0.5	1	5	10		
No Engineering Controls	\$0	\$0	\$0	\$0	\$0		
Total	\$0	\$0	\$0	\$0	\$0		

Cumulative Annualized Costs to Small Printing Establishments							
PEL (ug/m³)	0.25	0.5	1	5	10		
No Engineering Controls	\$0	\$0	\$0	\$0	\$0		
Total	\$0	\$0	\$0	\$0	\$0		

Sector 22. Printing. Exposure Monitoring Costs - Large Establishments.

22. PRINTING		Cost of Exposure Monitoria	ng to Large Est	ablishments			
Alternative PEL (ug/m3)	N/A	Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	Affected Job Category	All	All	All	All	All
Required Controls	Exposure	Required Controls	Exposure	Exposure	Exposure	Exposure	Exposure
	Monitoring		Monitoring	Monitoring	Monitoring	Monitoring	Monitoring
Capital  Number of plants represented by		Annualized					
the model input	100	O&M					
Percent of Plants that will	0001	Percent of plants not	100%	4000	1009/	1000	1000/
continue to use an outside contractor for monitoring	90%	performing quarterly monitoring requirements	100%	100%	100%	100%	100%
Percent of plants already with in-		Number of job categories					
house monitoring capabilities	10%	exposed at or above the PEL	0	0	0	0	0
B		Percent of plants that have					
Percent of plants that have not satisfied the initial monitoring	75%	an employees in at least on	100%	100%	100%	100%	100%
requirement		job category above the PEL					
	!	Time, in hours, for an					
Percent of plants that will		outside contractor					
develop in house monitoring	0%	(Industrial hygiene	0	. 0	0	0	0
capability		technician) to conduct quarterly-annual monitoring					
Number of Initial exposure							
measurements required to be	2	Percent of plants not performing semi-annual	100%	100%	100%	100%	100%
satisfied with semi-annual monitoring requirements		monitoring requirements	100 /0	10074	100%	100%	10070
• .		Number of job categories					
Number of personal sampling pumps required	5	exposed at or above the	0	0	0	0	0
,,.		action level					
Number of samples per exposure	2	Percent of plants that have an employees in at least on	100%	100%	100%	100%	100%
measurement	_	job category above the AL	10070	10070	15075	70072	.50%
		Time, in hours, for an					
In-house administrative time (e.g., for pump calibration and		outside contractor	_	_	_	_	_
report writing) per sample, in	0.5	(Industrial hygiene technician) to conduct semi	0	0	0	0	0
hours		annual monitoring					
Cost per hour for an outside	\$90.00	Useful life, in years, of a	10	10	10	10	10
Industrial hygiene contactor		personal sampling pump Annual O&M cost of a					
Time, in hours, for an outside contractor (industrial hygiene		personal sampling pump					
technician) to conduct the initial	12	as a percentage of capital cost (assumed to be 10%	10%	10%	10%	10%	10%
monitaring		of capital cost)					
		Cost of laboratory					
Total number of job categories (covering each work area)	3	processing samples associated with quarterly	\$0	\$0	\$0	\$0	\$0
(,		monitoring					
Non cuponinon wage rate \$/hr	\$12.07	Administrative cost of associated with quarterly	\$0	\$0	<b>\$</b> 0	\$0	\$0
Non-supervisory wage rate, \$/hr	\$12.07	monitoring	φu	Ψ0	••	Ψυ Ι	<b>4</b> 0
Time, in hours, to notify an		Cost of outside contractor	<b>e</b> n	**	*0	**	•0
exployee of the exposure monitoring results	0.25	for quarterly monitoring	\$0	\$0	\$0	\$0	\$0
		Cost associated with					
Cost of a personal sampling pump	\$680.00	notifying employees of	\$0	\$0	\$0	\$0	\$0
pump		quarterly monitoring results					1
Variable cost per sample (e.g.,	\$60.00	Quarterly monitoring	\$0	\$0	\$0	\$0	\$0
laboratory analysis)		O&M cost Cost of laboratory					
Number of work shifts	3	processing samples	\$0	\$0	\$0	\$0	\$0
Transci of Nork Silico	ŭ	associated with semi- annual monitoring	+5	ļ <del>,</del>	<b>-</b>	, ,,	4-
		Administrative cost of					
Supervisory wage rate, \$/hr	\$16.90	associated with semi-	\$0	\$0	\$0	\$0	\$0
Number of hours of training		annual monitoring					
required to develop in-house	16	Cost of outside contractor for semi-annual monitoring	\$0	\$0	\$0	\$0	\$0
monitoring capability		Cost associated with					
Clot foe for tonicing	£400.00	notifying employees of	••	\$0	\$0	\$0	\$0
Flat fee for training	\$400.00	semi-annual monitoring	\$0	ΦU	φυ	φυ	φυ
Number of calibration units		results Semi-annual monitoring					
required	1	O&M cost	\$0	\$0	\$0	\$0	\$0
Cost of a calibration unit	\$1,075.00	Total Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
Capital cost of exposure monitoring	\$0.00	+ Annualized Capital Cost	<b>\$</b> 0	\$0	\$0	\$0	\$0
Up-front cost of exposure	€333 B73 A^	Total Annualized Cost	<b>\$</b> 0	\$0	\$0	<b>\$</b> 0	\$0
monitoring	\$333,873.00	i Ardi Willingsten 2020	ψU	Ψυ	Ψυ	₩0	Ψυ
		Rounded Annualized Cost	\$0	\$0	\$0	\$0	\$0

			ng to Small Est				
Alternative PEL (ug/m3)	N/A	Atternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	Ali	Affected Job Category	All	All	All	All	Att
Required Controls	Exposure Monitoring	Required Controls	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring	Exposure Monitoring
Capital	Monitoring	Annualized	Monitoring	Monitoring	rvionitoring	Monitoring	WOINTOLD
Number of plants represented by	400	O&M					
the model input	400	]					
Percent of Plants that will continue to use an outside	90%	Percent of plants not performing quarterly	100%	100%	100%	100%	100%
contractor for monitoring	0070	monitoring requirements	10070	10070	13070	, , , , ,	150,0
Percent of plants already with in-	10%	Number of job categories exposed at or above the	0	0	0	0	0
house monitoring capabilities	10%	PEL PEL	Ŭ		ľ	ľ	J
Percent of plants that have not		Percent of plants that have					
satisfied the initial monitoring	75%	an employees in at least on job category above the	100%	100%	100%	100%	100%
requirement		PEL					
		Time, in hours, for an					
Percent of plants that will develop in house monitoring	0%	outside contractor	o	0	0	0	0
capability	0.0	(Industrial hygiene technician) to conduct	٠	v	ľ	Ū	
		quarterly-annual monitoring					
Number of initial exposure		Percent of plants not					
measurements required to be satisfied with semi-annual	2	performing semi-annual	100%	100%	100%	100%	100%
monitoring requirements		monitoring requirements					
Number of personal sampling		Number of job categories		_			•
pumps required	2	exposed at or above the action level	0	0	0	0	0
		Percent of plants that have					
Number of samples per exposure measurement	2	an employees in at least on	100%	100%	100%	100%	100%
measurement		job category above the AL					
In-house administrative time		Time, In hours, for an					
(e.g., for pump calibration and	0.5	outside contractor (Industrial hygiene	0	0	0	0	0
report writing) per sample, in hours	5.5	technician) to conduct semi			, ,	J	_
Cost per hour for an outside		annual monitoring Useful life, in years, of a					
industrial hygiene contactor	\$90.00	personal sampling pump	10	10	10	10	10
Time, in hours, for an outside		Annual O&M cost of a					
contractor (industrial hygiene	12	personal sampling pump as a percentage of capital	10%	10%	10%	10%	10%
technician) to conduct the initial monitoring		cost (assumed to be 10%		1070		10.0	
		of capital cost)					
Total number of job categories		Cost of laboratory processing samples	•	••	40		••
(covering each work area)	2	associated with quarterly	\$0	\$0	\$0	\$0	\$0
		monitoring Administrative cost of					
Non-supervisory wage rate, \$/hr	\$12.07	associated with quarterly	\$0	\$0	\$0	\$0	\$0
The labour to		monitoring	Ì				
Time, in hours, to notify an exployee of the exposure	0.25	Cost of outside contractor	\$0	\$0	\$0	\$0	\$0
monitoring results		for quarterly monitoring					
Cost of a personal sampling		Cost associated with					
pump	\$680.00	notifying employees of quarterly monitoring results	\$0	<b>\$</b> 0	\$0	<b>\$</b> 0	\$0
Variable and our sample (o. a.		Quarterly monitoring					
Variable cost per sample (e.g., laboratory analysis)	\$60.00	O&M cost	\$0	\$0	\$0	\$0	\$0
		Cost of laboratory					
Number of work shifts	1	processing samples associated with semi-	\$0	\$0	\$0	\$0	\$0
		annual monitoring					
Supervisory wage rate, \$/hr	\$16.90	Administrative cost of associated with semi-	\$0	\$0	\$0	\$0	\$0
Supervisory wage rate, arm	\$10.50	annual monitoring	**	40	•0	40	ΨΟ
Number of hours of training		Cost of outside contractor		••	••	••	••
required to develop in-house monitoring capability	16	for semi-annual monitoring	\$0	\$0	\$0	\$0	\$0
a and applied		Cost associated with					
Flat fee for training course	\$400.00	notifying employees of	\$0	\$0	\$0	\$0	\$0
-		semi-annual monitoring results					
Number of calibration units	1	Semi-annual monitoring	\$0	\$0	\$0	\$0	\$0
required		O&M cost				1	
Cost of a calibration unit	\$1,075.00	Total Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
apital cost of exposure monitoring	\$0.00	+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
p-front cost of exposure		ı İ	1				
nonitoring	\$750,376.00	Total Annualized Cost	\$0	\$0	\$0	\$0	\$0

Sector 22. Printing. Regulated Area Costs - Large Establishments.

22. PRINTING	· <del>-</del> · · · · · · · · · · · · · · · · · · ·				
Cost of R	egulated Areas -	Signs and Labe	els to Large Esta	ablishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Dequired Controls	Regulated	Regulated	Regulated	Regulated	Regulated
Required Controls	Areas - Signs and Labels	Areas - Signs and Labels	Areas - Signs and Labels	Areas - Signs and Labels	Areas - Signs and Labels
Capital					
Number of plants represented by the model plant	100	100	100	100	100
Percent of plants requiring additional warning signs for regulated areas	100%	100%	100%	100%	100%
Number of warning signs required for each regulated area	2	2	2	2	2
Number of job categories exposed above the PEL	0	0	0	0	0
Non-supervisory wage, \$/hr Unit cost of OSHA-	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
regulation warning signs with mounting materials	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84
Useful life, in years, of a warning sign	10	10	10	10	10
Time, in hours, to mount a warning sign	25.25	0.5	0.5	0.5	0.5
Total capital cost of regulated areas - signs and labels	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized O&M					
Total Annualized O&M Cost	\$0	· \$0	\$0	\$0	\$0
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
Total Annualized Cost	\$0	\$0	\$0	\$0	\$0
Rounded Annualized Cost	\$0	\$0	\$0	\$0	\$0

Sector 22. Printing. Regulated Area Costs - Small Establishments.

22. PRINTING					
Cost of R	egulated Areas -	Signs and Labe	els to Small Esta	blishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Required Controls	Regulated Areas - Signs and Labels				
Capital					
Number of plants represented by the model plant	400	400	400	400	400
Percent of plants requiring additional warning signs for regulated areas	100%	100%	100%	100%	100%
Number of warning signs required for each regulated area	2	2	2	2	2
Number of job categories exposed above the PEL	0	0	0	0	0
Non-supervisory wage, \$/hr Unit cost of OSHA-	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
regulation warning signs with mounting materials	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84
Useful life, in years, of a warning sign	10	10	10	10	10
Time, in hours, to mount a warning sign	25.25	0.5	0.5	0.5	0.5
Total capital cost of regulated areas - signs and labels	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized O&M	:				
Total Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
Total Annualized Cost	\$0	\$0	\$0	\$0	\$0
Rounded Annualized Cost	\$0	\$0	\$0	\$0	\$0

Sector 22. Printing. Respirator Fit Testing Costs - Large Establishments.

22. PRINTING	Cost of Panalisator	Fit-Testing to Large E	etablishmente	·	
Alternative PEL (ug/m3)	10	F It-resting to Large L	1 1	0.5	0.25
Affected Job Category	None	None	None	None	None
Required Controls	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing
Capital	vicepiidater vesting	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Total capital cost of respirator fit-testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized					
D&M					
Number of plants represented by the model plant	100	100	100	100	100
Percent of plants conducting annual respirator fit testing in the baseline	2%	2%	2%	2%	2%
Non-supervisory wage rate	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
Number of employees requiring annual qualitative fit-testing	0	0	0	0	. 0
Cost of materials per qualitative fit-testing	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Time, in hours, for a technician to conduct one qualitative fit-test	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be qualitative fit-tested	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be quantitative fit-tested	0.5	0.5	0.5	0.5	0.5
Number of employees requiring annual quantitative fit-testing	0	0	0	0	0
Cost of an industrial hygiene technician contractor per quantitative fit-test	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
Fotal Annualized Cost	<b>\$0</b>	\$0	\$0	\$0	\$0
Rounded Annualized Cost	\$0	\$0	\$0	\$0	\$0

Sector 22. Printing. Respirator Fit Testing Costs - Small Establishments.

	Cost of Respirator	Fit-Testing to Small E	stablishmente		
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	None	None	None	None	None
Required Controls	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing	Respirator-Testing
Capital		7.000	Transportation Tooling	Troopwater recting	Trespirator resting
Total capital cost of respirator fit-testing	\$0.00	\$0.00	\$0.00	\$0.00	<b>\$0</b> .00
Annualized O&M		i			
Number of plants represented by the model plant	400	400	400	400	400
Percent of plants conducting annual respirator fit- testing in the baseline	0.3%	0.3%	0.3%	0.3%	0.3%
Non-supervisory wage rate	<b>\$</b> 12.07	\$12.07	\$12.07	\$12.07	\$12.07
Number of employees requiring annual qualitative fit-testing	0	0	0	0	0
Cost of materials per qualitative fit-testing	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Time, in hours, for a technician to conduct one qualitative fit-test	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be qualitative fit-tested	0.25	0.25	0.25	0.25	0.25
Time, in hours, for an employee to be quantitative fit-tested	0.5	0.5	0.5	0.5	0.5
Number of employees requiring annual quantitative fit-testing	0	0	0	0	0
Cost of an industrial hyglene technician contractor per quantitative fit-test	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
otal Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
otal Annualized Cost	\$0	\$0	\$0	\$0	\$0
Rounded Annualized Cost	\$0	\$0	\$0	\$0	\$0

Sector 22. Printing. Respirator Protection Costs - Large Establishments.

22. PRINTING	Lef Declared Protect	lan fast area Establia	hannete		
Alternative PEL (ug/m3)	t of Respirator Protect	5	nments 1	0.5	0.25
Affected Job Category	None	None	None	None	None
Required Controls			Respirator Protection		
Capital	<del>                                     </del>				
•	100	100	100	100	100
Number of plants represented by the model plant	1	1	i		
Percent of the workers using air-supplied respirators	0%	0%	0%	0%	0% 0%
Percent of the workers using full-face respirators	0%	0%	0% 0.3%	0%	0.3%
Percent of the workers using half-mask respirators  Percent of the workers using blasting helmet air-supplied	0.3%	0.3%	0.3%	0.3%	0.376
respirators	0%	0%	0%	0%	0%
Unit cost per worker for an air-supplied respirator	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33
Number of workers requiring air-supplied respirators	0	o	l 0	o	o
because above PEL		· -		_	
Number of workers requiring air-supplied respirators because above AL	0	0	0	0	0
Unit cost per employee for a full-face respirator	\$25.25	\$243.00	\$243.00	\$243.00	\$243.00
Number of workers requiring full-face respirators because above PEL	0	0	0	0	0
Number of workers requiring full-face respirators because above AL	0	0	0	0	0
Unit cost per employees for a half-mask respirator	\$35.30	<b>\$</b> 35.30	\$35.30	\$35.30	\$35.30
Number of workers requiring half-mask respirators because above PEL	0	0	0	0	0
Number of workers requiring half-mask respirators because above AL	0	0	0	0	0
Unit cost per employee for a blasting helmet air-supplied respirator	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00
Number of workers requiring blasting helmet air-supplied respirators above PEL	o	0	0	0	0
Number of workers requiring blasting helmet air-supplied respirators above AL	0	0	0	0	0
Total capital cost for respirators	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized	Ì				
O&M	1				
Number of shifts per day	3	3	3	3	3
Number of operating days per year	250	250	250	250	250
Number of days a respirator filter cartridge may be in use	2	2	2	2	2
before it must be changed Cost of replacement cartridges (2 cartridges per mask)	\$13.74	\$13.74	\$13.74	<b>\$</b> 13.74	<b>\$13.74</b>
Useful life, in years, for an air-supplied respirator	10	10	10	10	10
Useful life, in years, for a full-face respirator	10	10	10	10	10
Useful life, in years, for a half-mask respirator	10	10	10	10	10
Useful life, in years, of a blasting helmet air-supplied	10	10	10	10	10
respirator	\$12.07	\$12.07	<b>\$</b> 12.07	\$12.07	\$12.07
Non-supervisory wage rate, \$/hour Cost of materials to clean one respirator	\$12.07 \$1.86	\$12.07 \$1.86	\$12.07 \$1.86	\$12.07 \$1.86	\$12.07 \$1.86
Time, in hours, for an employee to clean a respirator	0.167	\$1.86 0.167	0.167	0.167	0.167
Number of operating days per year that employees above					
the AL must wear respirators because of process upsets	20	20	20	20	20
Total Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
+ Annualized capital cost of respirator protection	\$0	\$0	\$0	\$0	\$0
Total Annualized Cost	\$0	\$0	\$0	\$0	\$0
Rounded Annualized Cost	\$0	\$0	\$0	\$0	\$0

Sector 22. Printing. Respirator Protection Costs - Small Establishments.

2. PRINTING Cos	of Respirator Protect	ion for Small Establis	hments		
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	None	None	None	None	None
Required Controls	Respirator Protection	Respirator Protection	Respirator Protection	Respirator Protection	Respirator Protectio
Capital					
Number of plants represented by the model plant	400	400	400	400	400
Percent of the workers using air-supplied respirators	0%	0%	0%	0%	0%
Percent of the workers using full-face respirators	0%	0%	0%	0%	0%
Percent of the workers using half-mask respirators	0.2%	0.2%	0.2%	0.2%	0.2%
Percent of the workers using blasting helmet air-supplied respirators	0%	0%	0%	0%	0%
Unit cost per worker for an air-supplied respirator	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33	\$1,473.33
Number of workers requiring air-supplied respirators because above PEL	0	0	o	0	o
Number of workers requiring air-supplied respirators because above AL	0	0	0	0	0
Unit cost per employee for a full-face respirator	\$25.25	\$243.00	\$243.00	\$243.00	\$243.00
Number of workers requiring full-face respirators because above PEL	0	0	o	0	0,
Number of workers requiring full-face respirators because above AL	, 0	0	0	0	0
Unit cost per employees for a half-mask respirator	\$35.30	\$35.30	\$35.30	\$35.30	\$35.30
Number of workers requiring half-mask respirators because above PEL	О	o	0	0	0
Number of workers requiring half-mask respirators because above AL	0	0	0	0	0
Unit cost per employee for a blasting helmet air-supplied respirator	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00	\$1,164.00
Number of workers requiring blasting helmet air-supplied respirators above PEL	0	0	0	0	0
Number of workers requiring blasting helmet air-supplied respirators above AL	0	0	0	0	0
otal capital cost for respirators	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
nnualized JAM					
യ്ഷ Number of shifts per day	1 1	1	1 1	1	1
Number of operating days per year	250	250	250	250	250
Number of days a respirator filter cartridge may be in use	2	2	2	2	2
before it must be changed	1			_	
Cost of replacement cartridges (2 cartridges per mask)	\$13.74	\$13.74	\$13.74	\$13.74	\$13.74
Useful life, in years, for an air-supplied respirator	10	10 10	10	10	10 10
Useful life, in years, for a full-face respirator	10 10	10	10 10	10 10	10
Useful life, in years, for a half-mask respirator Useful life, in years, of a blasting helmet air-supplied	"	"	10	10	
respirator	10	10	10	10	10
Non-supervisory wage rate, \$/hour	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
Cost of materials to clean one respirator	\$1.86	\$1.86	\$1.86	\$1.86	\$1.86
Time, in hours, for an employee to clean a respirator	0.167	0.167	0.167	0.167	0.167
Number of operating days per year that employees above the AL must wear respirators because of process upsets	20	20	20	20	20
otal Annualized O&M Cost	\$0	\$0	\$0	\$0	\$0
+ Annualized capital cost of respirator protection	\$0	\$0 \$0	<b>\$</b> 0	<b>\$</b> 0	<b>\$</b> 0
otal Annualized Cost ounded Annualized Cost	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 <b>\$</b> 0

Sector 22. Printing. PPE Costs - Large Establishments.

22. PRINTING  Cost of Personal Protection	tive Equipment fo	or Large Establish	ments	<u> </u>	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	Ali	All	All	None
	Personal	Personal	Personal	Personal	Personal
	Protective	Protective	Protective	Protective	Protective
	Clothing and				
Required Controls	Equipment	Equipment	Equipment	Equipment	Equipment
Capital		İ			
Total capital cost of personal protective clothing and equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Annualized					
O&M	ŀ				
Number of plants represented by the model plant	100	100	100	100	100
Percentage of plants in the baseline that supplied coveralls or aprons	70%	70%	70%	70%	70%
Percentage of plants in the baseline that supply eye protection	63%	63%	63%	63%	63%
Percentage of plants in the baseline that supply gloves	70%	70%	70%	70%	70%
Percentage of employers that will pay for coveralls or aprons					
according to industry practice under proposed standard	88.1%	88.1%	88.1%	88.1%	88.1%
Percentage of employers that will pay for eye protection according to					
Industry practice under proposed standard	91.9%	91.9%	91.9%	91.9%	91.9%
Percentage of employers that will pay for gloves according to industry					
practice under proposed standard	88.1%	88.1%	88.1%	88.1%	88.1%
Type of protective clothing required (PE coated Tyvek coveralls, Saranex coveralls, Tyvek coveralls, bib aprons or none)	uniforms	uniforms	uniforms	uniforms	uniforms
The unit cost for coveralls or aprons <sup>1</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
The annual number of replacements for coveralls or aprons <sup>1</sup>	0	0	0	0	0
Total number of PPE laundered per year	11,750	11,750	11,750	11,750	11,750
Unit cost of laundering one article of PPE	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50
Total Number of employees at the plant with the potential for dermal exposure	47	47	47	47	47
Type of protective eyeware required (clear indirect vent goggles, clear	clear Indirect vent	clear indirect vent	clear indirect vent	clear indirect vent	
lens safety glasses, grey lens safety glasses or none)	goggles	goggles	goggles	goggles	goggles
Unit cost of eye protection	\$10.10	\$10.10	\$10.10	\$10.10	\$10.10
Number of replacement during the year for eye protection	188	188	188	188	188
Type of gloves required (lined nitrile, powder surgical nitrile, rough	powder surgical	powder surgical	powder surgical	powder surgical	powder surgica
PVC, none)	nitrile	nitrile	nitrile	nitrile	nitrile
The unit cost for gloves	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24
Number of replacements during the year from gloves	23,500	23,500	23,500	23,500	23,500
Total Annualized O&M Cost for protective work clothing and equipment  Total Annualized Cost	\$2,172,876	\$2,172,876 \$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876 \$2,172,876
i otal Annualized Cost Rounded Annualized Cost	\$2,172,876 \$2,172,900	\$2,172,876 \$2,172,900	\$2,172,876 \$2,172,900	\$2,172,876 \$2,172,900	\$2,172,876

Rounded Annualized Cost \$2,172,900 \$2,172,90

Sector 22. Printing. PPE Costs - Small Establishments.

22. PRINTING									
Cost of Personal Protect	tive Equipment fo	or Small Establish	nments						
Alternative PEL (ug/m3)	10	5	1	0.5	0.25				
Affected Job Category	All	All	All	All	None				
Required Controls	Personal Protective Clothing and Equipment	Personal Protective Clothing and Equipment	Personal Protective Clothing and Equipment	Personal Protective Clothing and Equipment	Personal Protective Clothing and Equipment				
Capital									
Total capital cost of personal protective clothing and equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00				
Annualized O&M									
Number of plants represented by the model plant	400	400	400	400	400				
Percentage of plants in the baseline that supplied coveralls or aprons	46%	46%	46%	46%	46%				
Percentage of plants in the baseline that supply eye protection Percentage of plants in the baseline that supply gloves	45% 46%	45% 46%	45% 46%	45% 46%	45% 46%				
Percentage of employers that will pay for coveralls or aprons according to industry practice under proposed standard Percentage of employers that will pay for eye protection according to	88.1%	88.1%	88.1%	88.1%	88.1%				
industry practice under proposed standard  Percentage of employers that will pay for gloves according to Industry	91.9%	91.9%	91.9%	91.9%	91.9%				
practice under proposed standard	88,1%	88.1%	88.1%	88.1%	88.1%				
Type of protective clothing required (PE coated Tyvek coveralls, Saranex coveralls, Tyvek coveralls, bib aprons or none)	uniforms	uniforms	uniforms	uniforms	uniforms				
The unit cost for coveralls or aprons <sup>1</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00				
The annual number of replacements for coveralls or aprons <sup>1</sup> Total number of PPE laundered per year	0 750	0 750	0 750	0 750	0 750				
Unit cost of laundering one article of PPE	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50				
Total Number of employees at the plant with the potential for dermal exposure	3	3	3	3	3				
Type of protective eyeware required (clear indirect vent goggles, clear	clear Indirect vent	clear indirect vent	clear indirect vent	clear indirect vent	clear Indirect vent				
lens safety glasses, grey lens safety glasses or none)	goggles	goggles	goggles	goggles	goggles				
Unit cost of eye protection	\$10.10	\$10.10	\$10.10	\$10.10	\$10.10				
Number of replacement during the year for eye protection	12	12	12	12	12				
Type of gloves required (lined nitrile, powder surgical nitrile, rough	powder surgical	powder surgical	powder surgical	powder surgical	powder surgical				
PVC, none)	nitrile	nitrile	nitrile	nitrile	nitrile				
The unit cost for gloves	\$0.24	\$0.24	\$0.24	\$0.24	\$0.24				
Number of replacements during the year from gloves	1,500	1,500	, 1,500	1,500	1,500				
Total Annualized O&M Cost for protective work clothing and equipment	\$985,349	\$985,349	\$985,349	\$985,349	\$985,349				
Total Annualized Cost	\$985,349	\$985,349	\$985,349	\$985,349	\$985,349				
Rounded Annualized Cost	\$985,300	\$985,300	\$985,300	\$985,300	\$985,300				

The unit cost of replacement for coveralls or aprons and the annual number of replacements for coveralls or aprons is zero because the unit cost of laundering

Sector 22. Printing. Hygiene Areas and Practices Costs - Large Establishments.

22. PRINTING					
Cost of Hygiene Areas					
Alternative PEL (ug/m3)	10	5	1 1	0.5	0.25
Affected Job Category	All	All	All	All	All
Required Controls	Hyglene Areas and Practices	Hygiene Areas and Practices	Hyglene Areas and Practices	Hygiene Areas and Practices	Hygiene Areas and Practices
Capital	i				
Number of plants represented by the model plant	100	100	100	100	100
Percent of plants requiring additional changerooms	30%	30%	30%	30%	30%
Percent of plants requiring additional handwashing facilities	30%	30%	30%	30%	30%
Percent of plants that require additional showers and employee showering	30%	30%	30%	30%	30%
Number of additional shower heads needed	3	3	3	3	3
Total number of employees at the plant exposed below the PEL but with dermal exposure	47	47	47	47	47
Total number of employees at the plant exposed above the PEL	l o	l o	l o	0	0
Number of work shifts	3	3	3	3	3
Cost per shower head	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39
Cost per handwashing facility	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of additional handwashing facilities needed	3	3	3	3	3
Unit cost of changeroom per employee	\$1,261.92	\$1,261,92	\$1,261.92	\$1,261.92	\$1,261.92
Capital cost if install showers	\$476,315	\$476,315	\$476,315	\$476,315	\$476,315
Capital cost if install handwashing facilities	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
Capital cost of changerooms	\$593,101	\$593,101	\$593,101	\$593,101	\$593,101
Annualized					
O&M					
Useful life, in years, of change rooms	10	10	10	10	10
Useful life, in years, of handwashing facilities	10	10	10	10	10
Number of operating days per year	250	250	250	250	250
Daily janitorial and maintenance time, in minutes, per shower head	1	1	1	1	1
Janitorial wage rate, \$/hr	\$8.60	\$6.60	\$6.60	\$6.60	\$6.60
Non-supervisory wage rate, \$/hr	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
Useful life, in years, of showers	10	10	10	10	10
Time, in minutes, to shower	7.50	7.50	7.50	7.50	7.50
Variable cost per shower (soap, clean towel, water, etc.)	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Total Annualized O&M Cost if install showers and changerooms	\$710,559	<b>\$</b> 710,559	\$710,559	\$710,559	\$710,559
+ Annualized capital cost if install showers	\$67,827	\$67,827	\$67,827	\$67,827	\$67,827
+Annualized Capital cost if install changerooms at end of first year	\$73,208	\$73,208	\$73,208	\$73,208	\$73,208
Total Annualized Cost if install showers and changerooms	\$851,594	\$851,594	\$851,594	\$851,594	\$851,594
Rounded Annualized Cost if install showers and changerooms	\$851,600	\$851,600	\$851,600	\$851,600	\$851,600
Janitorial time to clean one handwashing facility, in minutes	10	10	10	10	10
Variable cost per handwashing facility (roll paper towels, liquid soap, water)	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
Total Annualized O&M cost if install handwashing facilities and changerooms	\$45,900	\$45,900	\$45,900	\$45,900	\$45,900
+ Annualized capital cost if install handwashing facilities and changerooms	\$6,408	\$6,408	\$6,408	\$6,408	\$6,408
+Annualized Capital cost if install changerooms at end of first year	\$73,208	\$73,208	\$73,208	\$73,208	\$73,208
Total Annualized Cost if install handwashing facilities and changerooms	\$125,516	\$125,516	\$125,516	\$125,516	\$125,516
Rounded Annualized cost if install handwashing facilities and changerooms	\$125,500	\$125,500	\$125,500	\$125,500	\$125,500

Sector 22. Printing. Hygiene Areas and Practices Costs - Small Establishments.

22. PRINTING					
Cost of Hyglene Areas : Alternative PEL (ug/m3)	and Practices for Sr 10				2.05
Affected Job Category	All	5 Ali	All	0.5	0.25 All
Allected 30b Category			Hygiene Areas and	All	
Required Controls	Practices	Practices	Practices	Practices	Practices
Capital			11454555	7.454655	7145000
Number of plants represented by the model plant	400	400	400	400	400
Percent of plants requiring additional changerooms	55%	55%	55%	55%	55%
Percent of plants requiring additional handwashing facilities	55% 55%	55% 55%			
Percent of plants that require additional showers and employee showering	55% 55%		55%	55%	55%
Number of additional shower heads needed		55%	55%	55%	55%
	2	2	2	2	2
Total number of employees at the plant exposed below the PEL but with dermal exposure	3	3	3	3	3
Total number of employees at the plant exposed above the PEL	0	0	0	0	0
Number of work shifts	2	2	2	2	2
Cost per shower head	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39	\$5,292.39
Cost per employee for change room facilities	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of additional handwashing facilities	2	2	2	2	2
Unit cost of changeroom per employee	\$1,261.92	\$1,261,92	\$1,261,92	\$1,261,92	\$1,261,92
Capital cost if install showers	\$2,328,650	\$2,328,650	\$2,328,650	\$2,328,650	\$2,328,650
Capital cost if install handwashing facilities	\$220,000	\$220,000	\$220,000	\$220,000	\$220,000
Capital cost of changerooms	\$416,433	\$416,433	\$416,433	\$416,433	\$416,433
Annualized O&M			i		
F 7007					
Useful life, in years, of change rooms	10	10	10	10	10
Useful life, In years, of handwashing facilities	10	10	10	10	10
Number of operating days per year	250	250	250	250	250
Daily janitorial and maintenance time, in minutes, per shower head	1	. 1	1	1	1
Janitorial wage rate, \$/hr	\$6.60	\$6.60	\$6.60	\$6.60	\$6.60
Non-supervisory wage rate, \$/hr	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
Useful life, in years, of showers	10	10	10	10	10
Time, in minutes, to shower	7.50	7.50	7.50	7.50	7.50
Variable cost per shower (soap, clean towel, water, etc.)	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Total Annualized O&M Cost if Install showers and changerooms	\$343,544	\$343,544	\$343,544	\$343,544	\$343,544
+ Annualized capital cost if Install showers	\$331,600	\$331,600	\$331,600	\$331,600	\$331,600
+Annualized Capital cost if install changerooms at end of first year	<b>\$51,4</b> 01	\$51,401	\$51,401	\$51,401	\$51,401
Total Annualized Cost if Install showers and changerooms	\$726,545	\$726,545	\$726,545	\$726,545	\$726,545
Rounded Annualized Cost If install showers and changerooms	\$726,500	\$726,500	\$726,500	\$726,500	\$726,500
Janitorial time to clean one handwashing facility, in minutes	10	10	10	10	10
Variable cost per handwashing facility (roll paper towels, liquid soap, water)	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
Total Annualized O&M cost if Install handwashing facilities and changerooms	\$130,900	\$130,900	\$130,900	\$130,900	\$130,900
+ Annualized capital cost if install handwashing facilities and changerooms	\$31,328	\$31,328	\$31,328	\$31,328	\$31,328
+Annualized Capital cost if install changerooms at end of first year	\$51,401	\$51,401	\$51,401	\$51,401	\$51,401
Total Annualized Cost if install handwashing facilities and changerooms	\$213,629	\$213,629	\$213,629	\$213,629	\$213,629
Rounded Annualized cost if install handwashing facilities and changerooms	\$213,600	\$213,600	\$213,600	\$213,600	\$213,600

Sector 22. Printing. Housekeeping Costs - Large Establishments.

22. PRINTING	Cost of Hou	usekeeping for Large	Establishments		
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Required Controls	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags	Housekeeping - Additional Control Using Wet or HEPA Vacuums and Garbage Bags
Capital  Number of plants represented by the model plant  Number of plants requiring new	100 80	100 80	100 80	100 80	100 80
HEPA vacuums Unit cost of HEPA vacuums	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24
Number of additional HEPA vacuums required	1	Ψ <b>2,020.2</b> Ψ	1	1	1
Total capital cost of housekeeping	\$186,339	\$186,339	\$186,339	\$186,339	\$186,339
Annualized  O&M  Number of plants represented  by the model plant	100	100	100	100	100
Number of plants requiring new HEPA vacuums	80	80	80	80	80
Number of additional HEPA vacuums required	1 .	1	1	1	1
Annual number of replacement filters per HEPA vacuum	2	2	2	2	2
Unit cost of HEPA vacuum replacement filters	\$312.53	\$312.53	\$312.53	\$312.53	\$312.53
Useful life, in years, of a HEPA vacuum	10	10	10	10	10
Annual O&M cost of HEPA vacuums as a percentage of capital cost (assumes 5% of capital)	\$9,316.96	\$9,316.96	\$9,316.96	\$9,316.9 <del>6</del>	\$9,316.96
Percent of plants not disposing of chromium under RCRA	0%	0%	0%	0%	0%
Number of additional garbage bags required per establishment per year	250	250	250	250	250
Unit cost of garbage bags and disposal	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
Number of operating days per year	250	250	250	250	250
Janitorial time, in hours per day, to HEPA vacuum Cr(VI) spills	0.5	0.5	0.5	0.5	0.5
Janitorial wage rate, \$/hour	\$6.60	\$6.60	\$6.60	\$6.60	\$6.60
Total Annualized O&M Cost	\$125,322	\$125,322	\$125,322	\$125,322	\$125,322
+ Annualized Capital Cost	\$26,535	\$26,535	\$26,535	\$26,535	\$26,535
Total Annualized Cost Rounded Annualized Cost	\$151,857 \$151,900	\$151,857 \$151,900	\$151,857 \$151,900	\$151,857 \$151,900	\$151,857 \$151,900

Sector 22. Printing. Housekeeping Costs - Small Establishments.

22. PRINTING  Cost of Housekeeping for Small Establishments									
Alternative DEL (v=(=0)		v	Establishments	0.5	0.25				
Affected lab Catalana	10 All	5 All	All	0.5 All	0.25 Ali				
Affected Job Category									
	Housekeeping -	Housekeeping -	Housekeeping -	Housekeeping -	Housekeeping -				
Required Controls	Additional Control	Additional Control	Additional Control Using Wet or HEPA	Additional Control Using Wet or HEPA	Additional Control Using Wet or HEPA				
Required Controls	Using Wet or HEPA Vacuums and	Using Wet or HEPA Vacuums and	Vacuums and	Vacuums and	Vacuums and				
	Garbage Bags	Garbage Bags	Garbage Bags	Garbage Bags	Garbage Bags				
	Carbago Bago	Cuibago bago	Carbago Dago	Odrodgo Dago	odisago bago				
Capital	-								
Number of plants represented by the model plant	400	400	400	400	400				
Number of plants requiring new									
HEPA vacuums	360	360	360	360	360				
Unit cost of HEPA vacuums	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24	\$2,329.24				
	φ2,023.24	φ2,023.24	φ2,023.24	φ2,023.24	Ψ2,323.24				
Number of additional HEPA vacuums required	1	1	1	1	1				
, and the second	#000 F00	Anna coo	6000 500	<b>#</b> 000 500	#000 F00				
Total capital cost of housekeeping	\$838,526	\$838,526	\$838,526	\$838,526	\$838,526				
Annualized	(								
O&M	`								
Number of plants represented									
by the model plant	400	400	400	400	400				
Number of plants requiring new									
HEPA vacuums	360	360	360	360	360				
Number of additional HEPA	_	_	_		_				
vacuums required	1	1	1	1	1				
, ,	•								
Annual number of replacement filters per HEPA vacuum	2	2	2	2	2				
•									
Unit cost of HEPA vacuum	\$312.53	\$312.53	\$312.53	\$312.53	\$312.53				
replacement filters	Ψ512.00	ψ512.05	Ψ312.03	ψ012.00	ψ012.00				
Useful life, in years, of a HEPA	10	10	10	10	10				
vacuum									
Annual O&M cost of HEPA									
vacuums as a percentage of	\$41,926.31	\$41,926.31	\$41,926.31	\$41,926.31	\$41,926.31				
capital cost (assumes 5% of capital)									
Capital)									
Percent of plants not disposing	0%	0%	0%	0%	0%				
of chromium under RCRA			- 11						
Number of additional garbage									
bags required per	250	250	250	250	250				
establishment per year									
Unit cost of garbage bags and	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00				
disposal	ψοσο.σο	Ψ000.00	Ψ555.55	Ψ000.00	ψουσ.σσ				
Number of operating days per	250	250	250	250	250				
year									
Janitorial time, in hours per day,	0.5	0.5	0.5	0.5	0.5				
to HEPA vacuum Cr(VI) spills	0.0	0.0	0.5	0.5	0.0				
Janitorial wage rate, \$/hour	\$6.60	\$6.60	\$6.60	\$6.60	\$6.60				
Total Annualized O&M Cost	\$563,949	\$563,949	\$563,949	\$563,949	\$563,949				
+ Annualized Capital Cost	\$119,406	\$119,406	\$119,406	\$119,406	\$119,406				
Total Annualized Cost	\$683,355	\$683,355	\$683,355	\$683,355	\$683,355				
Rounded Annualized Cost	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400				

Sector 22. Printing. Medical Surveillance Costs - Large Establishments.

Cost of Medical Surveillance for Large Establishments									
Affected Job Category	All	All	All	O.5	O.25				
Affected 300 Category	Medical	Medical	Medical	Medical	Medical				
Required Controls	Surveillance	Surveillance	Surveillance	Surveillance	Surveillanc				
apital					1				
Number of plants represented by the	100	100	100	100	100				
model plant	100	100	""	""					
Percent of previously exposed employees who will be found to have	0.5%	0.5%	0.5%	0.5%	0.5%				
abnormal exam results	0.574	0.5%	0.5%	0.5%	0.5%				
Clerical Wage, \$/hr	\$8.71	\$8.71	\$8.71	\$8.71	\$8.71				
Number of employees requiring					•				
comprehensive medical exam	0	0	0	0	0				
Full cost of a comprehensive medical	\$400.76	\$400.76	\$400.76	\$400.76	\$400.76				
exam Employee time, In hours, for a full	•								
comprehensive medical exam	3	3	3	3	3				
Number of employees requiring a				1	.				
limited medical exam	1	1	1	•	1				
Full cost of a limited medical exam	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00				
Employee time, in hours, for a full limited medical exam	1.5	1.5	1.5	1.5	1.5				
Clerical time per employee, in hours,			_ :						
to establish detailed medical records	1	1	1	1	1				
Non-supervisory wage rate, \$/hr	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07				
Total number of potentially exposed	4								
employees above the AL and workers with "signs and symptoms"	1	1 1	1	1	1				
otal up-front cost of medical surveillance	\$871	\$871	\$871	\$871	\$871				
	•		,	•					
nnualized					Į.				
D&M									
Percent of employees exposed at or		:			ļ				
above the action level 30 days per									
year (and therefore requiring a limited or comprehensive medical exam) who	0.5%	0.5%	0.5%	0.5%	0.5%				
will be found to have abnormal results		ľ							
<b>!</b>									
Percent of plants with annual medical testing in the baseline	80%	80%	80%	80%	80%				
Percent of plants that have jobs									
available for employees with abnormal	100%	100%	100%	100%	100%				
exam results									
Cost of additional medical testing after	\$213.17	\$213.17	<b>\$</b> 213.17	\$213.17	\$213.17				
exam results are abnormal		42.0	*	<b>7</b>	******				
Employee time, in hours, for additional medical testing after exam results are	1.5	1.5	1.5	1.5	1.5				
abnormal	1.0	1.5	1.5	1.0	1.0				
Cost of a partial comprehensive	\$200.38	\$200.38	\$200.38	\$200.38	\$200.38				
medical exam	\$200.30	\$200.00	\$200.56	\$200.30	\$200.50				
Incremental employee time, in hours,	1.5	1.5	1.5	1.5	1.5				
for a partial medical exam  Cost of a partial limited medical exam	\$106.59	\$106.59	\$106.59	\$106.59	\$106.59				
Incremental employee time, in hours,			•		-				
for a partial limited medical exam	0.75	0.75	0.75	0.75	0.75				
Length of time medical removal									
protection benefits are required for									
employees that have abnormal exam results and can't switch to a job that	0	0	D	0	0				
does not have exposure to chromium									
(VI) in days									
Supervisory time, in hours, for									
workplace reassessment after exam	4	4	4	4	4				
results are abnormal	\$16.90	<b>\$</b> 16.90	\$16.90	\$16.90	\$16.90				
Supervisory wage rate, \$/hr Employee turnover rate	\$16.90 29.16%	\$16.90 29.16%	29.16%	29.16%	29.16%				
% of dermally exposed employees		i							
with "signs and symptoms"	0.097%	0.097%	0.097%	0.097%	0.097%				
Number of employees requiring a	0	0	o	0	0				
limited medical exam b/c > AL	-			-					
Number of employees requiring a limited medical exam b/c of dermal	1	1	1	1	1				
"signs and symptoms"	•	'	'	'	'				
Number of employees requiring a									
comprehensive medical exam b/c >	0	0	0	0	0				
AL									
Number of employees requiring a	0	0	0	0	0				
comprehensive medical exam b/c of dermal "signs and symptoms"	١	'	v	١	U				
otal Annualized O&M Cost	\$14,811	\$14,811	\$14,811	\$14,811	\$14,811				
otal Annualized Cost	\$14,811	\$14,811	\$14,811	\$14,811	\$14,811				
ounded Annualized Cost	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800				

Sector 22. Printing. Medical Surveillance Costs - Small Establishments.

22. PRINTING Cos	22. PRINTING  Cost of Medical Surveillance for Small Establishments									
Alternative PEL (ug/m3)	10	5	1	0.5	0.25					
Affected Job Category	All	All	All	All	All					
Required Controls	Medical Surveillance	Medical Surveillance	Medical Surveillance	Medical Surveillance	Medical Surveillance					
Capital										
Number of plants represented by the	400	400	400	400	400					
model plant										
Percent of previously exposed employees who will be found to have	0.5%	0.5%	0.5%	0.5%	0.5%					
abnormal exam results										
Clerical Wage, \$/hr	\$8.71	\$8.71	\$8.71	\$8.71	\$8.71					
Number of employees requiring	0	0	0	o	o					
comprehensive medical exam Full cost of a comprehensive medical										
exam	\$400.76	\$400.76	\$400.76	\$400.76	\$400.76					
Employee time, in hours, for a full	3	3	3	3	3					
comprehensive medical exam Number of employees requiring a				_						
limited medical exam	1	1	1	1	1					
Full cost of a limited medical exam	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00					
Employee time, in hours, for a full	1.5	1.5	1.5	1.5	1.5					
limited medical exam Clerical time per employee, in hours,										
to establish detailed medical records	1	1 1	1	1	1					
Non-supervisory wage rate, \$/hr	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07					
Total number of potentially exposed employees above the AL and workers	1	1 1	1 1	1	1					
with "signs and symptoms"	•	<b>'</b>	<u>'</u>	'	·					
Total up-front cost of medical surveillance	\$3,484	\$3,484	\$3,484	\$3,484	\$3,484					
A		·								
Annualized O&M										
Percent of employees exposed at or above the action level 30 days per										
year (and therefore requiring a limited	0.5%	0.5%	0.5%	0.5%	0.5%					
or comprehensive medical exam) who										
will be found to have abnormal results										
Percent of plants with annual medical	10%	10%	10%	10%	10%					
testing in the baseline	10%	10%	10%	1074	10,0					
Percent of plants that have jobs available for employees with abnormal	50%	50%	50%	50%	50%					
exam results	00%	1 20%	00,0	3575	00,0					
Cost of additional medical testing after	\$213.17	\$213.17	\$213.17	\$213.17	\$213.17					
exam results are abnormal	42.0		<b>4</b> _1 <b>4</b>	<b>4</b> 2.0	42.0					
Employee time, in hours, for additional medical testing after exam results are	1.5	1.5	1.5	1.5	1.5					
abnormal										
Cost of a partial comprehensive	\$200.38	\$200.38	\$200.38	\$200.38	\$200.38					
medical exam Incremental employee time, in hours,		, i	·	·						
for a partial medical exam	1.5	2.5	3.5	4.5	5.5					
Cost of a partial limited medical exam	\$106.59	\$106.59	\$106.59	\$106.59	\$106.59					
Incremental employee time, in hours,	0.75	1.75	2.75	3.75	4.75					
for a partial limited medical exam Length of time medical removal		:								
protection benefits are required for										
employees that have abnormal exam	. 0	0	o	o	0					
results and can't switch to a job that	Ť	]		j	Ĭ					
does not have exposure to chromium (VI) in days										
Supervisory time, in hours, for										
workplace reassessment after exam	4	4	4	4	4					
results are abnormal	\$16.90	\$16.90	\$16.90	\$16.90	<b>\$16.9</b> 0					
Supervisory wage rate, \$/hr Employee turnover rate	\$16.90 29.16%	\$16.90 29.16%	\$16.90 29.16%	\$16.90 29.16%	\$16.90 29.16%					
% of dermaily exposed employees	0.097%	0.097%	0.097%	0.097%	0.097%					
with "signs and symptoms"	0.05176	0.03170	0.03176	U.U31 /B	0.03176					
Number of employees requiring a limited medical exam b/c > AL	0	0	0	0	0					
Number of employees requiring a					:					
limited medical exam b/c of dermal	1	1	1	1	1					
"signs and symptoms"										
Number of employees requiring a	_	ا م ا	,	^	,					
comprehensive medical exam b/c > AL	0	0	0	0	0					
Number of employees requiring a		[								
comprehensive medical exam b/c of	0	0	0	0	0					
dermal "signs and symptoms"	\$100.010	£400.000	£400 F70	#404.004	\$404 E11					
Total Annualized O&M Cost Total Annualized Cost	\$102,613 \$102,613	\$103,096 \$103,096	\$103,579 \$103,579	\$104,061 \$104,061	\$104,544 \$104,544					
Rounded Annualized Cost	\$102,600	\$103,100	\$103,600	\$104,007	\$104,500					

Sector 22. Printing. Communication Costs - Large Establishments.

22. PRINTING  Cost of Communication of C	hromlum (VI) Haz	ards to Employee	es for Large Estat	lishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
	Communication	Communication	Communication	Communication	Communication
	of Chromium (VI)	of Chromium (VI)	of Chromium (VI)	of Chromium (VI)	of Chromium (VI)
	Hazards to	Hazards to	Hazards to	Hazards to	Hazards to
Required Controls	Employees	Employees	Employees	Employees	Employees
Capital			İ		
Number of plants represented by the model plant	100	100	100	100	100
Clerical Wage rate, \$/hour	\$8.71	\$8.71	\$8.71	\$8.71	\$8.71
Clerical time, in hours, for initial training	4	4	4	4	4
Supervisory time, in hours, for initial training	32	32	32	32	32
Employee time, in hours, for initial training	4	4	4	4	4
Non-supervisory wage rate, \$/hour	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
Number of potentially exposed employees above the	47	47	47	47	47
PEL and workers with dermal exposure	7'	7′	<b></b>		7,
Supervisory wage rate, \$/hour	<b>\$</b> 16.90	\$16.90	\$16.90	\$16.90	\$16.90
Cost per employee for training aids and materials	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Bilingual Trainer Wage Rate, \$/hour	<b>\$</b> 13.88	\$13.88	\$13.88	\$13.88	\$13.88
Number of potentially exposed employees per training session	10	10	10	10	10
Percent of plants requiring warning signs that employee is entering a regulated area signs	100%	100%	100%	100%	100%
Number of job categories exposed above the PEL	0	0	0	0	0
Number of warning signs for entering each regulated area	2	2	2	2	2
Unit cost of OSHA-regulation warning signs with mounting materials	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84
Useful life, in years, of a warning sign	10	10	10	10	10
Total up-front cost of communication of hazards	\$319,974	\$319,974	\$319,974	\$319,974	\$319,974
Total capital cost of communication of hazards	\$0	\$0	\$0	\$0	\$0
Annualized					:
O&M					
Annual clerical time, in hours, to prepare for annual training	0	0	0	0	0
Employee time, in hours, for annual training	0	0	0	0	0
Annual supervisory time, in hours, for initial and annual training	0	0	0	0	0
Total number of employees at the plant exposed at or above the action level	0	0	0	0	0
Total number of employees at the plant exposed below the action level but with dermal exposure	47	47	47	47	47
Employee turnover rate	29.16%	29.16%	29.16%	29.16%	29.16%
Fotal Annualized Q&M Cost	\$101,663	\$101,663	\$101,663	\$101,663	\$101,663
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
Total Annualized Cost	\$101,663	\$101,663	\$101,663	\$101,663	\$101,663
Rounded Annualized Cost	\$101,700	\$101,700	\$101,700	\$101,700	\$101,700

Sector 22. Printing. Communication Costs - Small Establishments.

22. PRINTING  Cost of Communication of	Chromium (VI) Ha	azards to Employ	ees for Small Esta	ablishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
	Communication of Chromium (VI) Hazards to	Communication of Chromium (VI) Hazards to	Communication of Chromium (VI) Hazards to	Communication of Chromium (VI) Hazards to	Communication of Chromium (VI Hazards to
Required Controls	Employees	Employees	Employees	Employees	Employees
Capital			İ .		
Number of plants represented by the model plant	400	400	400	400	400
Clerical Wage rate, \$/hour	\$8.71	\$8.71	\$8.71	\$8.71	\$8.71
Clerical time, in hours, for initial training	4	4	4	4	4
Supervisory time, in hours, for initial training	8	8	8	8	8
Employee time, in hours, for initial training	4	4	4	4	4
Non-supervisory wage rate, \$/hour Number of potentially exposed employees	\$12.07	\$12.07	\$12.07	\$12.07	\$12.07
above the PEL and workers with dermal exposure	3	3	3	3	3
Supervisory wage rate, \$/hour Cost per employee for training aids and	\$16,90	\$16.90	\$16.90	\$16.90	\$16.90
materials	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Bilingual Trainer Wage Rate, \$/hour	\$13.88	\$13.88	\$13.88	\$13.88	\$13.88
Number of potentially exposed employees per training session	10	10	10	10	10
Percent of plants requiring warning signs that employee is entering a regulated area signs	100%	100%	100%	100%	100%
Number of job categories exposed above the PEL	0	0	0	0	0
Number of warning signs for entering each regulated area	2	2	2	2	2
Unit cost of OSHA-regulation warning signs with mounting materials	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84
Useful life, in years, of a warning sign	10	10	10	10	10
Total up-front cost of communication of hazards Total capital cost of communication of hazards	\$135,014 \$0	\$135,014 \$0	\$135,014 \$0	\$135,014 \$0	\$135,014 \$0
Annualized					
O&M Annual clerical time, in hours, to prepare for				0	0
annual training	0	0	0	0	0
Employee time, in hours, for annual training Annual supervisory time, in hours, for initial and	0	0	0	0	0
annual training	0	0	0	0	0
Total number of employees at the plant exposed at or above the action level	0	0	0	0	0
Total number of employees at the plant exposed below the action level but with dermal exposure	3	3	3	3	3
Employee turnover rate	29.16%	29.16%	29.16%	29.16%	29.16%
Total Annualized O&M Cost	\$25,957	\$25,957	\$25,957	\$25,957	\$25,957
+ Annualized Capital Cost	\$0	\$0	\$0	\$0	\$0
Total Annualized Cost	\$25,957	\$25,957	\$25,957	\$25,957	\$25,957
Rounded Annualized Cost	\$26,000	\$26,000	\$26,000	\$26,000	\$26,000

Sector 22. Printing. Recordkeeping Costs - Large Establishments.

22. PRINTING									
Cost of Recordkeeping for Large Establishments									
Alternative PEL (ug/m3)	10	5	1	0.5	0.25				
Affected Job Category	All	All	All	All	All				
Required Controls	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping				
Capital				İ					
Number of plants represented by the model plant	100	100	100	100	100				
Total number of employees at the plant exposed above the action level	0	0	0	0	o				
Total number of employees at the plant exposed below the action level but with dermal exposure	47	47	47	47	47				
Cost per employee for computer file space	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00				
Total capital cost of recordkeeping	\$4,700.00	\$4,700.00	\$4,700.00	\$4,700.00	\$4,700.00				
Annualized O&M									
Clerical wage rate, \$/hour	\$8.71	\$8.71	\$8.71	\$8.71	\$8.71				
Useful life, in years, of computer file space	. 10	10	10	10	10				
Annual incremental clerical recordkeeping time per employee, in hours	1.5	1.5	1.5	1.5	1.5				
Total Annualized O&M Cost	\$61,406	\$61,406	\$61,406	\$61,406	\$61,406				
+ Annualized capital cost of recordkeeping	\$669	\$669	\$669	\$669	\$669				
Total Annualized Cost	\$62,075	\$62,075	\$62,075	\$62,075	\$62,075				
Rounded Annualized Cost	\$62,100	\$62,100	\$62,100	\$62,100	\$62,100				

Sector 22. Printing. Recordkeeping Costs - Small Establishments.

Cost of	Recordkeeping	for Small Estab	lishments		
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Required Controls	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping	Recordkeeping
Capital					
Number of plants represented by the model plant	400	400	400	400	400
Total number of employees at the plant exposed above the action level	0	0	0	0	О
Total number of employees at the plant exposed below the action level but with dermal exposure	3	3	3	3	3
Cost per employee for computer file space	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Total capital cost of recordkeeping	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00
Annualized O&M Clerical wage rate, \$/hour	\$8.71	\$8.71	\$8.71	\$8.71	\$8.71
Useful life, in years, of computer file space	10	10	10	10	10
Annual incremental clerical recordkeeping time per employee, in hours	1.5	1.5	1.5	1.5	1.5
Total Annualized O&M Cost	\$15,678	\$15,678	\$15,678	\$15,678	\$15,678
+ Annualized capital cost of recordkeeping	\$171	\$171	\$171	\$171	\$171
Total Annualized Cost	\$15,849	\$15,849	\$15,849	\$15,849	\$15,849
Rounded Annualized Cost	\$15,800	\$15,800	\$15,800	\$15,800	\$15,800

Annualized Cost Required to Achiev	re Alternative PEL	During the First Ye	ear for Large Print	ng Establishment	<u> </u>
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	Ail	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$333,873	\$333,873	\$333,873	\$333,873	\$333,873
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876
Hygiene Areas and Practices		1			
if install showers and changerooms	\$851,600	\$851,600	\$851,600	\$851,600	\$851,600
if install handwashing facilities and changerooms	\$125,500	\$125,500	\$125,500	\$125,500	\$125,500
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$151,900	\$151,900	\$151,900	\$151,900	\$151,900
Medical Surveillance	\$15,682	\$15,682	\$15,682	\$15,682	\$15,682
Communication of Chromium (VI) Hazards to Employees	\$421,674	\$421,674	\$421,674	\$421,674	\$421,674
Recordkeeping	\$62,100	\$62,100	\$62,100	\$62,100	\$62,100
Total Annualized Cost in the First Year to Achieve Alternative PEL					
if install showers and changerooms	\$4,009,706	\$4,009,706	\$4,009,706	\$4,009,706	\$4,009,706
if install handwashing facilities and changerooms	\$3,283,606	\$3,283,606	\$3,283,606	\$3,283,606	\$3,283,606

Annualized Cost Required to Achiev	e Alternative PEL	After the First Ye	ar for Large Printin	g Establishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	Ali	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$0	\$0	\$0	\$0	\$0
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876
Hygiene Areas and Practices					
If install showers and changerooms	\$851,600	\$851,600	\$851,600	\$851,600	\$851,600
if Install handwashing facilities and changerooms	\$125,500	\$125,500	\$125,500	\$125,500	\$125,500
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$151,900	\$151,900	\$151,900	\$151,900	\$151,900
Medical Surveillance	\$14,811	\$14,811	\$14,811	\$14,811	\$14,811
Communication of Chromium (VI) Hazards to Employees	\$101,700	\$101,700	\$101,700	\$101,700	\$101,700
Recordkeeping	\$62,100	\$62,100	\$62,100	\$62,100	\$62,100
Total Annualized Cost to Achieve Alternative PEL After the First Year					
If install showers and changerooms	\$3,354,987	\$3,354,987	\$3,354,987	\$3,354,987	\$3,354,987
If install handwashing facilities and changerooms	\$2,628,887	\$2,628,887	\$2,628,887	\$2,628,887	\$2,628,887

10 Year Annual Cost Require	d to Achieve Alte	rnative PEL for La	rge Printing Estab	lishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	ΑĭI	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$47,536	\$47,536	\$47,536	\$47,536	\$47,536
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	<b>\$</b> 0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876	\$2,172,876
Hygiene Areas and Practices					
If install showers and changerooms	\$851,600	\$851,600	\$851,600	\$851,600	\$851,600
if install handwashing facilities and changerooms	\$125,500	\$125,500	\$125,500	\$125,500	\$125,500
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$151,900	\$151,900	\$151,900	\$151,900	\$151,900
Medical Surveillance	\$14,935	\$14,935	\$14,935	\$14,935	\$14,935
Communication of Chromium (VI) Hazards to Employees	\$147,257	\$147,257	\$147,257	\$147,257	\$147,257
Recordkeeping	\$62,100	\$62,100	\$62,100	\$62,100	\$62,100
Total Annualized Cost to Achieve Alternative PEL After the First Year					
If install showers and changerooms	\$3,448,204	\$3,448,204	\$3,448,204	\$3,448,204	\$3,448,204
if install handwashing facilities and changerooms	\$2,722,104	\$2,722,104	\$2,722,104	\$2,722,104	\$2,722,104

Annualized Cost Required to Achiev	e Alternative PEL	During the First Y	ear for Small Print	ing Establishment	<b>5</b>
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$750,376	\$750,376	\$750,376	\$750,376	\$750,376
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$985,349	\$985,349	\$985,349	\$985,349	\$985,349
Hyglene Areas and Practices	Į.				
If install showers and changerooms	\$726,500	\$726,500	\$726,500	\$726,500	\$726,500
if Install handwashing facilities and changerooms	\$213,600	\$213,600	\$213,600	\$213,600	\$213,600
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400
Medical Surveillance	\$106,097	\$106,580	\$107,063	\$107,545	\$108,028
Communication of Chromium (VI) Hazards to Employees	\$161,014	\$161,014	\$161,014	\$161,014	\$161,014
Recordkeeping	\$15,800	\$15,800	\$15,800	\$15,800	\$15,800
Total Annualized Cost In the First Year to Achieve Alternative PEL					
If install showers and changerooms	\$3,428,537	\$3,429,019	\$3,429,502	\$3,429,985	\$3,430,468
if install handwashing facilities and changerooms	\$2,915,637	\$2,916,119	\$2,918,602	\$2,917,085	\$2,917,568

Annualized Cost Required to Achiev	e Alternative PEL	After the First Ye	ar for Small Printin	ig Establishments	
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	Afl	Aff	Ali
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$0	\$0	\$0	\$0	\$0
Regulated Areas - Signs and Labels	\$D	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$985,349	\$985,349	\$985,349	\$985,349	\$985,349
Hygiene Areas and Practices					
If install showers and changerooms	\$726,500	\$726,500	\$726,500	\$726,500	\$726,500
if install handwashing facilities and changerooms	\$213,600	\$213,600	\$213,600	\$213,600	\$213,600
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400
Medical Surveillance	\$102,613	\$103,096	\$103,579	\$104,061	\$104,544
Communication of Chromium (VI) Hazards to Employees	\$26,000	\$26,000	\$26,000	\$26,000	\$26,000
Recordkeeping	\$15,800	\$15,800	\$15,800	\$15,800	\$15,800
Total Annualized Cost to Achieve Alternative PEL After the First Year					
If install showers and changerooms	\$2,539,662	\$2,540,145	\$2,540,628	\$2,541,111	\$2,541,593
if install handwashing facilities and changerooms	\$2,026,762	\$2,027,245	\$2,027,728	\$2,028,211	\$2,028,693

10 Year Annual Cost Require	d to Achieve Alte	emative PEL for Si	mall Printing Estab	lishments	
Atternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$106,837	\$106,837	\$106,837	\$106,837	\$106,837
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$985,349	\$985,349	\$985,349	\$985,349	\$985,349
Hygiene Areas and Practices					
If install showers and changerooms	\$726,500	\$726,500	\$726,500	\$726,500	\$726,500
if install handwashing facilities and changerooms	\$213,600	\$213,600	\$213,600	\$213,600	\$213,600
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$683,400	\$683,400	\$683,400	\$683,400	\$683,400
Medical Surveillance	\$103,109	\$103,592	\$104,075	\$104,557	\$105,040
Communication of Chromium (VI) Hazards to Employees	\$45,223	\$45,223	\$45,223	\$45,223	\$45,223
Recordkeeping	\$15,800	\$15,800	\$15,800	\$15,800	\$15,800
Total Annualized Cost to Achieve Alternative PEL After the First Year					
If install showers and changerooms	\$2,666,218	\$2,666,701	\$2,667,184	\$2,667,666	\$2,668,149
if install handwashing facilities and changerooms	\$2,153,318	\$2,153,801	\$2,154,284	\$2,154,766	\$2,155,249

Sector 22. Printing. Cost per Establishment - Large Establishments.

Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	ΑſI	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$3,339	\$3,339	\$3,339	\$3,339	\$3,339
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$21,729	\$21,729	\$21,729	\$21,729	\$21,729
Hygiene Areas and Practices					
If install showers and changerooms	\$8,516	\$8,516	\$8,516	\$8,516	\$8,516
if install handwashing facilities and changerooms	\$1,255	\$1,255	\$1,255	\$1,255	\$1,255
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$1,519	\$1,519	<b>\$</b> 1,519	\$1,519	<b>\$1,</b> 519
Medical Surveillance	\$25	\$157	\$157	\$157	\$157
Communication of Chromium (VI) Hazards to Employees	\$4,217	\$4,217	\$4,217	\$4,217	\$4,217
Recordkeeping	\$621	\$621	\$621	\$621	\$621
Total Annualized Cost in the First Year to Achieve Alternative PEL				-	
If Install showers and changerooms	\$39,965	\$40,097	\$40,097	\$40,097	\$40,097
if install handwashing facilities and changerooms	\$32,704	\$32,836	\$32,836	\$32,836	\$32,836

Annualized Cost Required to Achieve Alternative PE	L After the First	Year for One Large	Printing Establish	ment Based on the	Model Plant
Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	AN	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$0	\$0	\$0	\$0	\$0
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$21,729	\$21,729	\$21,729	\$21,729	\$21,729
Hygiene Areas and Practices				]	
If Install showers and changerooms	\$8,516	\$8,516	\$8,516	\$8,516	\$8,516
If Install handwashing facilities and changerooms	\$1,255	\$1,255	\$1,255	\$1,255	\$1,255
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$1,519	\$1,519	\$1,519	<b>\$</b> 1,519	\$1,519
Medical Surveillance	\$148	\$148	\$148	\$148	\$148
Communication of Chromium (VI) Hazards to Employees	\$1,017	\$1,017	\$1,017	\$1,017	\$1,017
Recordkeeping	\$621	\$621	\$621	\$621	\$621
Total Annualized Cost to Achieve Alternative PEL After the First Year					
if install showers and changerooms	\$33,550	\$33,550	\$33,550	\$33,550	\$33,550
if install handwashing facilities and changerooms	\$26,289	\$26,289	\$26,289	\$26,289	\$26,289

10 Year Annual Cost Required to	Achieve Alterna	ative PEL for One L	arge Printing Esta	blishment	
Altemative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	Alí	All	All	Alf	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$475	\$475	\$475	\$475	\$475
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	<b>\$</b> 0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$21,729	\$21,729	\$21,729	\$21,729	\$21,729
Hygiene Areas and Practices		1			
If install showers and changerooms	\$8,516	\$8,516	\$8,516	\$8,516	\$8,516
if Install handwashing facilities and changerooms	\$1,255	\$1,255	\$1,255	\$1,255	\$1,255
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$1,519	\$1,519	<b>\$1</b> ,519	\$1,519	\$1,519
Medical Surveillance	\$131	\$149	\$149	\$149	\$149
Communication of Chromium (VI) Hazards to Employees	\$1,473	\$1,473	\$1,473	\$1,473	\$1,473
Recordkeeping	\$621	\$621	\$621	\$621	\$621
Total Annualized Cost to Achieve Alternative PEL After the First Year					
If install showers and changerooms	\$34,463	\$34,482	\$34,482	\$34,482	\$34,482
if install handwashing facilities and changerooms	\$27,202	\$27,221	\$27,221	\$27,221	\$27,221

Alternative PEL (ug/m3)	10	5	1	0.5	0.25
Affacted Job Category	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$1,876	\$1,876	\$1,876	\$1,876	\$1,876
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$2,463	\$2,463	\$2,463	\$2,463	\$2,463
Hygiene Areas and Practices	i				
If install showers and changerooms	\$1,816	\$1,816	\$1,816	\$1,816	\$1,816
if install handwashing facilities and changerooms	\$534	<b>\$</b> 534	\$534	\$534	\$534
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$1,709	\$1,709	\$1,709	\$1,709	\$1,709
Medical Surveillance	\$265	\$266	\$268	\$269	\$270
Communication of Chromium (VI) Hazards to Employees	\$403	\$403	\$403	\$403	\$403
Recordkeeping	\$40	\$40	\$40	\$40	\$40
Total Annualized Cost in the First Year to Achieve Alternative PEL					
If install showers and changerooms	\$8,571	\$8,573	\$8,574	\$8,575	\$8,576
if install handwashing facilities and changerooms	\$7,289	\$7,290	\$7,292	\$7,293	\$7,294

Annualized Cost Required to Achieve Alternative P	EL After the Firs	t Year for One Smi	all Printing Establi	shment Based on t	the Model Plant
Afternative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	Ali
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$0	\$0	\$0	\$0	\$0
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	\$0	\$0	\$0	\$0
Personal Protective Equipment	\$2,463	\$2,463	\$2,463	\$2,463	\$2,463
Hygiene Areas and Practices		1			
If install showers and changerooms	\$1,816	\$1,816	\$1,816	\$1,816	\$1,816
if install handwashing facilities and changerooms	\$534	\$534	\$534	\$534	\$534
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$1,709	\$1,709	\$1,709	\$1,709	\$1,709
Medical Surveillance	\$257	\$258	\$259	\$260	\$261
Communication of Chromium (VI) Hazards to Employees	\$65	\$65	<b>\$</b> 65	\$65	\$65
Recordkeeping	\$40	\$40	\$40	\$40	\$40
Total Annualized Cost to Achieve Alternative PEL After the First Year	\$6,883	\$6,884	\$6,886	\$6,887	\$6,888
if install showers and changerooms	\$6,349	\$6,350	\$6,352	\$6,353	\$6,354
if install handwashing facilities and changerooms	\$5,067	\$5,068	\$5,069	\$5,071	\$5,072

10 Year Annual Cost Required	to Achieve Altern	native PEL for One	Small Printing Es	tablishment	
Altemative PEL (ug/m3)	10	5	1	0.5	0.25
Affected Job Category	All	All	All	All	All
Engineering Controls	\$0	\$0	\$0	\$0	\$0
Exposure Monitoring	\$267	\$267	\$267	\$267	\$267
Regulated Areas - Signs and Labels	\$0	\$0	\$0	\$0	\$0
Respirator Fitting	\$0	\$0	\$0	\$0	\$0
Respirator Protection	\$0	<b>\$</b> 0	\$0	\$0	\$0
Personal Protective Equipment	\$2,463	\$2,463	\$2,463	\$2,463	\$2,463
Hygiene Areas and Practices					
If install showers and changerooms	\$1,816	\$1,816	\$1,816	\$1,816	\$1,816
if Install handwashing facilities and changerooms	\$534	\$534	\$534	\$534	\$534
Housekeeping - Additional Control Using Wet or HEPA Vacuums	\$1,709	\$1,709	\$1,709	\$1,709	\$1,709
Medical Surveillance	\$258	\$259	\$260	\$261	\$263
Communication of Chromium (VI) Hazards to Employees	\$113	\$113	\$113	\$113	\$113
Recordkeeping	\$40	\$40	\$40	\$40	\$40
Total Annualized Cost to Achieve Alternative PEL After the First Year					
If Install showers and changerooms	\$6,666	\$6,667	\$6,668	\$6,669	\$6,670
if install handwashing facilities and changerooms	\$5,383	\$5,385	\$5,386	\$5,387	\$5,388

ESTABLISHMENTS	Total Industr	.,	Affected Es	tablishments	
Establishments with < 20 Employees Establishments with ≥ 20 Employees TOTAL	2,874	¥	400 100 500	Percent 13.92% 27.03% 15.41%	age
EMPLOYEES	Total		Affected Es	tablishments	
Establishments with < 20 Employees Establishments with ≥ 20 Employees TOTAL		¥	Number 1,833 6,668 8,501	Percent 13.92% 27.03% 22.46%	
REYENUES	Total			tablishments	
Establishments with < 20 Employees Establishments with ≥ 20 Employees TOTAL	\$ 1,119,05 \$ 2,096,30 \$ 3,215,36	8,569 \$ 1,743 \$	Total 155,749,279 566,568,039 722,317,318	\$ 5,6	<u>89,373</u> 65,680 44,635
PROFITS	0-4-			tablishments	.h
Establishments < 20 Establishments ≥ 20 TOTAL	Rate 4.27% 4.27% 4.27%	\$ \$ \$	Total 6,642,862 24,164,693 30,807,556	\$ 2	61,615
ENTERPRISES & ESTABLISHMENTS ENTERPRISE & ESTABLISHMENT SU Small Business / < 20 Employees Small Business / ≥ 20 Employees TOTAL SMALL		Affected terprises 396 <u>94</u> 490		Affected ablishments 399 <u>94</u> 493	
Large Business / < 20 Employees Large Business / ≥ 20 Employees TOTAL LARGE		5		1 <u>6</u> 7	
TOTAL		495		500	
REYENUE & PROFITS, BY ENTERPRISE & ESTABLISHMENT SIZ Small Business / < 20 Employees Small Business / ≥ 20 Employees	\$	tevenue 155,359,906 532,573,956	\$ \$	Profits 6,626,255 22,714,812	
SUBTOTAL SMALL	\$	687,933,862	\$	29,341,067	
Large Business / < 20 Employees Large Business / ≥ 20 Employees	\$ \$ \$	389,373 33,994,082	\$ \$ \$	16,607 1,449,882	
				1.466.489	
SUBTOTAL LARGE	•	34,383,456	•	1,400,403	
SUBTOTAL LARGE		on Printing	•	1,400,403	
BASELINE VALUES	(mpacts	on Printing		Profit	
BASELINE VALUES Small Businesses	Impacts R Total \$ 687,93	on Printing Sevenue per Bu 3,862 \$1,40	<u>usiness To</u> 03,947 ####	Profit tal per Bu	usiness Rate 59,880 4.27%
BASELINE VALUES	(mpacts R Total	on Printing Sevenue Der Bu 3,862 \$ 1,40	usiness To 03,947 #### \$1,46	Profit otal per Bu	usiness Rate
BASELINE VALUES Small Businesses Large Businesses All Businesses	[mpacts R Total \$ 687,93: \$ 34,38:	on Printing (eyenue per Bi 3,862 \$1,46 7,318	usiness To 03,947 #### \$1,46 ####	Profit tal <u>per Bu</u> ###### \$ 9 66,489	usiness Rate 59,880 4.27% 4.27% 4.27%
BASELINE VALUES Small Businesses Large Businesses All Businesses PEL = 10 ug/m3		on Printing  eyenua  per By 3,862 \$ 1,40 3,456 7,318  Complian  per Business	usiness To 03,947 #### \$1,46 #### nce Costs	Profits  Profits	Isiness Rate 59,880 4.27% 4.27% 4.27% Profit Rate After Costs
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses	Impacts   R   Total   \$ 687,93   \$ 34,38   \$ 722,31   \$ 168,710   \$ 168,710	on Printing  (eyenue per Bi  3,862 \$1,40  3,456  7,318	usiness To 33,947 #### \$1,46 #### nce Costs 1 % Revenue 0.68% 0.49%	Profits 16.04% 11.50%	151ness Rate 59,880 4.27% 4.27% 4.27% Profit Rate After Costs 3.58% 3.77%
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses	mpacts   R   Total   \$ 4,706,713	on Printing  eyenua  per By 3,862 \$ 1,40 3,456 7,318  Complian  per Business	usiness To 03,947 #### \$1,46 #### nce Costs 1 % Revenue 0.68%	Profits 16.04%	15iness Rate 59,880 4.27% 4.27% 4.27% Profit Rate After Costs 3.58%
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses	Impacts   R   Total   \$ 687,93   \$ 34,38   \$ 722,31   Total   \$ 4,706,713   \$ 168,710   \$ 4,875,422	on Printing  (eyenua	usiness To 03,947 #### \$1,46 #### nce Costs 1 % Revenue 0.68% 0.49% 0.67%	Profit ###### \$ 56489 ###### % Profits 16.04% 11.50% 15.83%	Since   Sinc
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses  PEL = 5.0 ug/m3  Small Businesses	Impacts   R   Total   \$ 4,706,713   \$ 168,710   \$ 4,875,422   Total   \$ 4,707,194   \$ 4,707,194	on Printing  (eyenua	usiness To 33,947 ####  \$1,46 ####  nce Costs 4	Profits 16.04% 11.50% 15.83%	Sample
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses PEL = 5.0 ug/m3	Impacts   R   Total   \$ 687,93   \$ 34,38   \$ 722,31   Total   \$ 4,706,713   \$ 168,710   \$ 4,875,422   Total   I	on Printing  eyenue per Bi 3,862 \$1,46 3,456 7,318  Complian per Business \$ 9,606  Complian per Business	usiness To 03,947 #### \$1,46 ####  nce Costs 1 % Revenue 0.68% 0.49% 0.67%	Profits 16.04% 11.50% 15.83%	### Section
BASELINE VALUES  Small Businesses Large Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses PEL = 5.0 ug/m3  Small Businesses Large Businesses	Intal   \$ 4,706,713   \$ 4,875,422   \$ 168,710   \$ 4,707,194   \$ 168,711	on Printing  eyenue per Bi 3,862 \$1,46 3,456 7,318  Complian per Business \$ 9,606  Complian per Business	usiness To 33,947 #### \$1,46 #### nce Costs 2 Kevenue 0.68% 0.49% 0.67% nce Costs 2 Kevenue 0.68% 0.49%	Profits 16.04% 11.50%	Since   Sinc
BASELINE VALUES  Small Businesses Large Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses PEL = 5.0 ug/m3  Small Businesses Large Businesses	Impacts   Impa	on Printing  Sevenue  per Bi 3,862 \$1,46 3,456 7,318  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian	usiness To 33,947 #### \$1,46 #### nce Costs 2 Kevenue 0.68% 0.49% 0.67% nce Costs 2 Kevenue 0.68% 0.49%	Profits 16.04% 11.50%	25incss Rate 59,880 4.27% 4.27% 4.27% 4.27% Profit Rate After Costs 3.58% 3.77% 3.59% Profit Rate After Costs 3.58% 3.77% 3.59%
BASELINE VALUES  Small Businesses Large Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses All Businesses All Businesses Large Businesses All Businesses Large Businesses All Businesses All Businesses  PEL = 1.0 ug/m3  Small Businesses	Intal   \$ 4,707,676   \$ 4,707,676   \$ 4,707,676   \$ 4,875,905   \$ 4,707,676   \$ 4,875,905   \$ 4,707,676   \$ 4,70	on Printing  Sevenue  per Bi 3,862 \$1,46 3,456 7,318  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian  Compilian	USINESS TO #### \$1.44	######################################	Since   Sinc
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses Large Businesses All Businesses All Businesses	Impacts   R   Total   \$ 4,706,713   \$ 168,710   \$ 4,875,422   Total   \$ 4,707,194   \$ 168,711   \$ 4,875,905   Total   \$ 4,875,905	on Printing  Sevenus  Der Bi 3,862 \$1,46 3,456 7,318  Compiliar  Compiliar  Der Business \$ 9,606  Compiliar  C	usiness To ####  103,947 ####  114,141  115,146  116,147	Profits 16.04% 11.50% 15.83%  **Profits 16.04% 11.50% 15.83%	Since   Sinc
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 1.0 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses All Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses	Impacts   R   S   G87,93   \$ 687,93   \$ 722,31   \$ 168,710   \$ 4,706,713   \$ 168,710   \$ 4,875,422   \$ 168,711   \$ 4,875,905   \$ 4,875,905   \$ 4,707,676   \$ 168,712   \$ 4,707,676   \$ 4,707,712   \$ 4	on Printing  Sevenue  Der Bi  3,862 \$1,46  7,318  Complian  Der Business \$9,606  Complian  Compl	USINESS TO #### #### #### ####   103.947 #####   104.84	######################################	Section   Sect
BASELINE VALUES  Small Businesses Large Businesses All Businesses  PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses  PEL = 5.0 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses Large Businesses Large Businesses Large Businesses Large Businesses All Businesses	Impacts   R   S   687,93; \$ 34,38; \$ 722,31    S   4,706,713 \$ 168,710 \$ 4,875,422   S   4,707,194 \$ 168,711 \$ 4,875,905   S   4,707,676 \$ 168,712 \$ 4,876,388   S   5,7041 \$ 5,7041	on Printing Sevenus Per Bi 3,862 \$1,40 3,456 7,318  Compiliar Per Business \$ 9,606  Compiliar Per Business \$ 9,607  Compiliar Per Business \$ 9,608	usiness	###### \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Section   Sect
BASELINE VALUES  Small Businesses Large Businesses All Businesses PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses All Businesses All Businesses PEL = 1.0 ug/m3  Small Businesses Large Businesses All Businesses All Businesses All Businesses Small Businesses All Businesses All Businesses	Impacts   R   Total   \$ 4,707,194   \$ 168,711   \$ 4,875,905   Total   \$ 4,707,676   \$ 4,876,388   \$ 4,708,188   \$ 168,713   \$ 4,708,188   \$ 168,713   \$ 5,708,188   \$ 5,708,188	on Printing  eyenus  per Bi 3,862 \$1,46 3,456 7,318  Compilar  per Business \$ 9,606  Compilar  per Business \$ 9,607	usiness To ####  103,947 ####  114,141  115,141	Profits 16.04% 11.50% 15.83%  ********  *******  ********  ********	Since   Sinc
BASELINE VALUES  Small Businesses Large Businesses All Businesses PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses Large Businesses All Businesses PEL = 1.0 ug/m3  Small Businesses Large Businesses Large Businesses All Businesses All Businesses All Businesses	Impacts   Impa	on Printing Sevenus Per Bi 3,862 \$1,40 3,456 7,318  Compiliar Per Business \$ 9,606  Compiliar Per Business \$ 9,607  Compiliar Per Business \$ 9,608	USINESS TO 03,947 ####  \$1,46 ####  nce Costs 2 Kevenue 0.68% 0.49% 0.68% 0.49% 0.68% 0.49% 0.68% 0.49% 0.68% 0.49% 0.68%	Profits 16.04% 11.50% 15.83%  ********  ********  *********  ******	Section   Sect
BASELINE VALUES  Small Businesses Large Businesses All Businesses PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses All Businesses All Businesses PEL = 1.0 ug/m3  Small Businesses Large Businesses All Businesses All Businesses All Businesses Small Businesses All Businesses All Businesses	Impacts   R   Total   \$ 687,93   \$ 722,31   Total   \$ 4,706,713   \$ 168,710   \$ 4,875,422   Total   \$ 4,707,194   \$ 168,711   \$ 4,875,905   Total   \$ 4,707,676   \$ 168,712   \$ 4,876,888   Total   \$ 4,708,188   \$ 168,713   \$ 4,876,871   \$ 4,876,871	on Printing  Sevenus  Per Bi 3,862 \$1,44 3,456 7,318  Compilian  C	usiness To ####  103,947 #####  114	###### \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Section   Sect
BASELINE VALUES  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses All Businesses All Businesses PEL = 1.9 ug/m3  Small Businesses All Businesses All Businesses All Businesses All Businesses All Businesses Large Businesses All Businesses All Businesses All Businesses All Businesses All Businesses All Businesses	Impacts   R   Total   \$4,707,676   \$168,712   \$4,875,905   Total   \$4,707,676   \$4,875,905   Total   \$4,707,676   \$4,876,388   \$168,713   \$4,708,639   \$4,708,6	on Printing  Sevenus  Per Bi 3,862 \$1,44 3,456 7,318  Compilian  C	usiness To ####  103,947 #####  104	Profits 16.04% 11.50% 15.83%  ********  *******  *******  *******  ****	Since   Sinc
BASELINE VALUES  Small Businesses Large Businesses All Businesses PEL = 10 ug/m3  Small Businesses Large Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses All Businesses PEL = 1.0 ug/m3  Small Businesses Large Businesses Large Businesses All Businesses All Businesses All Businesses All Businesses Large Businesses Large Businesses Large Businesses All Businesses All Businesses	Impacts   Impa	on Printing  Sevenue  per Bi 3,862 \$1,46 3,456 7,318  Compilar  per Business \$ 9,608  Compilar  per Business \$ 9,608  Compilar  per Business \$ 9,608  Compilar  per Business \$ 9,608	usiness To 03,947 ####  ******** ******** ******** *******	Profits 16.04% 11.50% 15.83%  **Profits 16.04% 11.50% 15.83%  **Profits 16.04% 11.50% 15.83%  **Profits 16.05% 15.83%	Section   Sect

<sup>\*</sup> Source of Data on Revenue and Profit Rate: I.R.S., Corporation Source Book of Statistics of Income, 2000